## CA - FINAL



## STRATEGIC FINANCIAL

 MANAGEMENT
## CORPORATE VALUATION

By GAURAV JAINN
FCA, CFA L3 Candidate
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Trading Equity Currency \& Commodity
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## Corporate Valuation

## LOS 1 : Introduction



## LOS 2: Dividend Yield Valuation Method

$$
\text { Dividend Yield }=\frac{\text { DPS }}{\text { MPS }}
$$

$$
\text { MPS }=\frac{\text { DPS }}{\text { Dividend Yield }}
$$

Note:
DPS $=\frac{\text { Total dividend paid }}{\text { Total number of equity shares }}$
Total Market Value $=$ MPS $\times$ Total Number of Equity share

## LOS 3: Earning Yield Valuation Method

$$
\begin{aligned}
& \text { Earning Yield }=\frac{\text { EPS }}{\text { MPS }} \\
& \text { MPS }=\frac{\text { EPS }}{\text { Earning Yield }}
\end{aligned}
$$

Therefore, EPS = Earning available to Equity Share holders Total number of equity shares

## LOS 4 : P/E Ratio Valuation Model

$$
P / E \text { Ratio }=\frac{\text { MPS }}{\text { EPS }}
$$

```
MPS = EPS × P/E Ratio
```

LOS 5 : Value Based on Future Maintainable Profits (FMP's)

$$
\text { Value of Business }=\frac{\text { Future Maintainable Profit }}{\text { Relevant Capitalisation Rate }}
$$

## Value of Business - Market Value of Debt = Value of Equity

## Calculation of Future Maintainable Profits:

| Average Past Year Profits before tax | xxx |
| :--- | :--- |
| Add : All Profit likely to arise in Future | xxx |
| All Actual Expenses \& Losses not likely to occur in future | xxx |
| Less: All Profit not likely to occur in Future | xxx |
| All Actual Expenses \& Losses likely to occur in future | xxx |
| Future Maintainable Profits (FMP's) before tax | xxx |
| Less: Tax | xxx |
| FMP's after tax | xxx |

## Note:

## Treatment of Sunk Cost

Sunk Cost are those cost which are not relevant for decision making. These cost must be totally ignored. Example: Allocated Fixed Cost, R \& D cost already incurred.

## LOS 6 : Net Asset Valuation Method (For Equity)

$$
\text { NAV per Share }=\frac{\text { Total Assets }- \text { Total External Liability }}{\text { Total number of equity shares }}
$$

## Note:

## 1. The following external liabilities should be deducted

* All short term (Current Liabilities) and Long Term Liabilities (Debenture, Loans, etc) including outstanding and accrued interest.
* Provision for Taxation
* Liabilities not provided for in the accounts i.e. Contingent Liabilities which have crystallized now.
* Liabilities arising out of prior period adjustment
* Preference Share Capital including Arrears of dividend and proposed preferred Dividend
* Proposed Equity Dividend (If the objective is to determine ex-dividend value of equity share).

2. Total assets doesn't include Miscellaneous Expenditure to the extend not yet written-off, fictitious assets, accumulated losses, profit \& Loss (Dr.) Balance.
3. NAV may be calculated by using
a) Book Value (BV): The BV of an asset is an accounting concept based on the historical data given in the balance sheet of the firm.
b) Market Value (MV): The MV of an asset is defined as the price which is prevailing on the market.
c) Liquidating Value (LV): The LV refers to the net difference between the realizable value of all assets and the sum total of external liabilities. This net difference belongs to the owners/ shareholders and is known as LV.
4. If question is silent always prefer Market Value weights.

## LOS 7 : Economic Value Added (EVA)

It is excess return over minimum return which is expected by the company on its Capital employed.

## EVA $=$ NOPAT $-\mathrm{K}_{0} \times$ Average Capital Invested

## Calculation of NOPAT:

* NOPAT means, Net Operating Profit After Tax but before any distribution of Interest, Preference Dividend and Equity Dividend.
i.e. NOPAT = EBIT ( $1-$ Tax Rate )

Note: It excludes non-operating income \& expenses/losses like

* Profit/Loss on Sale of Fixed Assets
* Interest on non-trade investment
* Profit/Loss on trading in shares \& bonds
- Interest income from Loans \& Advances

Calculation of Cost of Overall Capital:
$\mathrm{K}_{0}=$ Cost of Overall Capital $=$ WACC $=$ Weighted Average Cost of Capital
$K_{e} W_{e}+K_{r} W_{r}+K_{D} W_{D}+K_{P} W_{P}$

## Note:

1. $\mathrm{K}_{\mathrm{d}}=$ Interest (1- Tax Rate)
2. $\mathrm{K}_{e}=\mathrm{R}_{\mathrm{f}}+\beta\left(\mathrm{R}_{\mathrm{m}}-\mathrm{R}_{\mathrm{f}}\right) \quad$ Or $\quad \mathrm{K}_{\mathrm{e}}=\frac{D_{1}}{P_{0}}+\mathrm{g}$
3. $K_{p}=$ Preference Dividend ( $1+$ CDT $)$
4. Calculation of Average Capital Invested:

## $\underline{\text { Capital at the beginning + Capital at the End of Year }}$ <br> 2

5. Calculation of Capital Invested:

|  | Equity share capital |
| :--- | :--- |
| Add | Preference share capital |
|  | Reserve \& Surplus |
|  | Debenture/Bonds |
|  | Long-Term Loan |
| Less | P/L (Dr. Balance) |
|  | Preliminary Expenses |
|  | Miscellaneous Expenditure |

Note: It excludes:

* Investment in Equity shares \& Bonds
* Loans \& Advances
* Non-Trade Investment

6. Financial Leverage $=\frac{\text { EBIT }}{\text { EBT }}$ Or $=\frac{\text { EBIT }}{\text { EBIT }- \text { Interest }}$
7. $\mathrm{EBIT}=\mathrm{EBT}+$ Interest
$\mathrm{EBIT}=\frac{P A T}{(1-\text { tax } \text { rate })}+$ Interest
EBIT $=\frac{\text { Earning for equity }+ \text { Pref Div }}{(1-\text { tax rate })}+$ Interest
8. Note :

* Operating profits may have to be adjusted using matching concept.
* There might be some intangible assets such as patents, trademark etc. which is not shown in balance sheet, we need to include that in invested capital.
* The balance sheet figures of assets \& liabilities are at book value. If replacement cost is provided, take invested capital at replacement cost instead of Book Value.


## LOS 8 : Value of Business using EVA Method

Valuation of Business using EVA Method (Assume Constant growth after 2 years):

$$
M V A=\frac{E V A_{1}}{\left(1+K_{0}\right)^{1}}+\frac{\operatorname{EVA}_{2}}{\left(1+K_{0}\right)^{2}}+\frac{\frac{\operatorname{EVA}_{2}(1+g)}{K_{0}-g}}{\left(1+K_{0}\right)^{2}}
$$

MVA = Value of Business - Total Capital Employed
Value of Business = Total Capital Employed + MVA

## LOS 9: Discounted Cash Flow approach or Free Cash Flow Approach or Value of Business using FCFE \& FCFF

Under this approach, we will calculate value of business by discounting the future cash flows.

## Steps Involved:

Step 1: Calculation of Free Cash Flow of each Year.
Step 2: Calculate Terminal Value at the end of forecast period.
Step 3: Compute Discount Rate
Step 4: Calculate Present Value of Business/ Equity by discounting the Cash Flows \& Terminal Value.

## Calculation of Terminal Value / Continuing Value / Salvage Value

Terminal Value is calculated at the end of the Project Life or at the end of the forecasted period.

## Note:

* Given in the Question.
* Assumption of Growth Model (Let's assume Growing Cash Flow after 3 Years)

$$
P_{0}=\frac{C F_{1}}{\left(1+K_{0}\right)^{1}}+\frac{C F_{2}}{\left(1+K_{0}\right)^{2}}+\frac{C F_{3}}{\left(1+K_{0}\right)^{3}}+\frac{\left[\frac{C F_{3}(1+g)}{K_{0}-g}\right]}{\left(1+K_{0}\right)^{3}}
$$

## * Assumption of Constant Model/ Perpetuity Approach (Let's assume Constant Cash Flow after 3 Years)

$$
\mathrm{P}_{0}=\frac{\mathrm{CF}_{1}}{\left(1+\mathrm{K}_{0}\right)^{1}}+\frac{\mathrm{CF}_{2}}{\left(1+\mathrm{K}_{0}\right)^{2}}+\frac{\mathrm{CF}_{3}}{\left(1+\mathrm{K}_{0}\right)^{3}}+\frac{\left[\frac{\mathrm{CF}_{3}}{\mathrm{~K}_{0}}\right]}{\left(1+\mathrm{K}_{0}\right)^{3}}
$$

* Continuing value/ Terminal Value is calculated because it is not easy to estimate realistic cash flows, so we take uniform assumption of Constant Model or Growth Model.



## Calculation of FCFF

| EBITDA | xxx |
| :--- | :--- |
| Less : Depreciation(NCC) | $x x x$ |
| EBT | $x x x$ |
| Less : Tax | $x x x$ |
| NOPAT | $x x x$ |


| Add : Depreciation (NCC) | xxx |
| :--- | :--- |
| Less : Increase in Working Capital (WCInv) | xxx |
| Less : Capital Expenditure (FCInv) | xxx |
| Free Cash Flow For Firm (FCFF) | xxx |

## Calculation of FCFE

## Method 1 : When Debt-financing ratio is given:

| EBITDA | xxx |
| :--- | :--- |
| Less: Depreciation \& Amortisation | xxx |
| EBIT | xxx |
| Less : Interest | xxx |
| EBT | xxx |
| Less : Tax | xxx |
| PAT | xxx |
| Add : Depreciation $\times \%$ Equity Invested | xxx |
| Less: Increase in Working Capital $\times \%$ Equity Invested | xxx |
| Less: Capital Expenditure $\times \%$ Equity Invested | xxx |
| Free Cash Flow for Equity (FCFE) | $\mathbf{x x x}$ |

## Calculation of FCFE

## Method 2 : When Debt-financing ratio is not given:

| EBITDA | xxx |
| :--- | :--- |
| Less : Depreciation \& Amortisation | xxx |
| EBIT | xxx |
| Less : Interest | xxx |
| EBT | xxx |
| Less : Tax | xxx |
| PAT | xxx |
| Add : Depreciation (NCC) | xxx |
| Less: Increase in Working Capital (WCInv) | xxx |
| Less: Capital Expenditure (FCInv) | xxx |
| Add: Net Borrowings | xxx |
| Free Cash Flow for Equity (FCFE) | $\mathbf{x x x}$ |

## LOS 10 : Calculation of Range of Valuation

The range of valuation means we have to calculate minimum \& maximum value of business by using more than one method as indicated in question.

## LOS 11 : Valuation with NPV decision

$$
\text { Revised MPS }=\text { Existing MPS } \pm \frac{\text { Total NPV }}{\text { Total number of Equity Shares }}
$$

## LOS 12 : Market Value Added (MVA)

## From Equity Point of View

$$
\begin{aligned}
\text { MVA } & =\left[\begin{array}{c}
\left.\begin{array}{c}
\text { Value of Equity }- \text { Value of the Equity } \\
\text { as per market }
\end{array}\right] \text { as per Books of A/c's }
\end{array}\right] \text { for equity shareholders } \\
& =\text { MPS } \times \text { No. of Equity share }- \text { Equity Shareholder's Fund. }
\end{aligned}
$$

Note:

|  | Equity share capital |
| :--- | :--- |
| Add | Reserve \& Surplus |
| Less | P/L (Dr. Balance) |
|  | Preliminary Expenses |
|  | Miscellaneous Expenditure |

## From Overall company's Point of View

MVA = Value of the company based on Free Cash Flows - Total Capital Employed
Note: Total Capital Employed

|  | Equity share capital |
| :--- | :--- |
| Add | Preference share capital |
|  | Reserve \& Surplus |
|  | Debenture/Bonds |
|  | Long-Term Loan |
| Less | P/L (Dr. Balance) |
|  | Preliminary Expenses |
|  | Miscellaneous Expenditure |

